DEPARTMENT OF TRANSPORTATION SERVICES

MUFI HANNEMANN
MAYOR

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

WAYNE Y. YOSHIOKA
DIRECTOR

SHARON ANN THOM
DEPUTY DIRECTOR

May 21, 2010 RT2/09-299125R

Mr. Kirk Belsby
Kamehameha Schools
567 South King Street
Honolulu, Hawaii 96813-3036

Dear Mr. Belsby:

Subject: Honolulu High-Capacity Transit Corridor Project
Comments Received on the Draft Environmental Impact Statement

The U.S. Department of Transportation Federal Transit Administration (FTA) and the City and County of Honolulu Department of Transportation Services (DTS) issued a Draft Environmental Impact Statement (EIS) for the Honolulu High-Capacity Transit Corridor Project. This letter is in response to substantive comments received on the Draft EIS during the comment period, which concluded on February 6, 2009. The Final EIS identifies the Airport Alternative as the Project and is the focus of this document. The selection of the Airport Alternative as the Preferred Alternative was made by the City to comply with the National Environmental Policy Act (NEPA) regulations that state that the Final EIS shall identify the Preferred Alternative (23 CFR § 771.125 (a)(1)). This selection was based on consideration of the benefits of each alternative studied in the Draft EIS, public and agency comments on the Draft EIS, and City Council action under Resolution 08-261 identifying the Airport Alternative as the Project to be the focus of the Final EIS. The selection is described in Chapter 2 of the Final EIS. The Final EIS also includes additional information and analyses, as well as minor revisions to the Project that were made to address comments received from agencies and the public on the Draft EIS. The following paragraphs address comments regarding the above-referenced submittal:

I. Effects of Construction On Business

A. Physical Effects

Response to Comment #1 regarding construction effects on businesses

Economic impacts during construction are presented in the Final EIS. Section 4.18.1 of the Final EIS lists mitigation measures to reduce adverse economic hardships for existing businesses (including small businesses) along the project alignment during construction.

As stated in Section 4.18.1 of the Final EIS, access to businesses near construction activities could be temporarily affected, but will be maintained. Properties that are anticipated to be acquired by the Project, including businesses are identified in Appendix C: Preliminary Right-of-Way Plans.

The City will coordinate with property owners regarding both temporary impacts during construction and long term impacts including,, but not limited to, construction phasing and schedule, temporary utility disruptions, utility service connections, access or driveway reconstruction, acquisition and relocation, landscape protection, landscape restoration, fencing, mail delivery, and garbage collection. This City will notify and coordinate with adjacent property owners adjacent to the project that will be temporarily impacted during construction and when the Project will require acquisition or property. Coordination will be on-going during design and construction.

Your suggestions regarding the Maintenance of Traffic (MOT) Plan and Transit Mitigation Program have been noted. Many of the suggestions are already discussed in the Final EIS. For instance, Section 4.18.1 of the Final EIS states that, "access to businesses near construction activities could be temporarily affected but will be maintained." In addition, "to the extent practicable, [the Project will] coordinate the timing of temporary facility closures to minimize impacts to business activities—especially those related to seasonal or high sales periods." As part of the City's coordination with businesses, advanced notice will be provided if utilities will be disrupted and shut-offs will be scheduled during non-business hours. Sections 3.5.7 and 8.7 of the Final EIS discuss public involvement activities that will occur during construction. Many of the other suggested elements in your letter have been incorporated into the construction contract documents as performance specifications or as design criteria. Regarding the request for covered walkways in lieu of chain-link fencing, the contractor will be required to provide a covering if the Project affects an adjacent awning or where there is a potential for falling debris. Covering provided in other situations could be considered on a case-by-case basis, subject to City approval. In addition, allowing artwork on fences could also be considered on a case-by-case basis subject to City approval.

The request to prepare a Business Disruption Mitigation Plan will be considered during the development of detailed construction mitigation procedures. Some elements, such as having a staff person work directly with the public and property owners to resolve construction-related problems, will be part of the MOT Plan or public information program. The DTS will work with all adjacent property owners and their tenants during construction to minimize disruption to local businesses.

B. Economic Effects

Response to Comment # 2 regarding economic effects and mitigation

An analysis of the impacts to businesses during construction is provided in both the Final EIS and the Honolulu High-Capacity Transit Corridor Project Economics Technical Report (RTD 2008c). An analysis of construction impacts is shown on Page 5-6 of the Economics Technical Report, which can be found on the project website at www.honolulutransit.org. The primary impacts are anticipated to result from inconveniences and disruptions to adjacent residents, businesses, and business customers that are inherent in any major construction project, which include the following:

- *Presence of construction workers and material.*
- *Temporary road closures and traffic diversions.*
- *Temporary reductions in parking availability.*
- *Airborne dust, noise, and vibrations.*
- *Businesses' loss of visibility to their customers.*

As discussed in Section 4.18 of the Final EIS, the City will mitigate these temporary effects to protect residents' and businesses' comfort and daily life, as well as to prevent inconveniences and disruptions to the flow of customers, employees, materials, and supplies to and from area businesses based on successful efforts on other projects.

The City will employ the following measures during construction:

- *Maintain access to businesses during construction.*
- *Develop a public involvement plan prior to construction to inform business owners of the construction schedule and activities.*
- *Initiate public information campaigns to reassure people that businesses are open during construction and to encourage their continued patronage.*
- *Minimize the extent and number of businesses, jobs, and access affected during construction.*
- *Coordinate the timing of temporary facility closures to minimize impacts to business activities— especially those related to seasonal or high sales periods— to the extent practicable.*
- *Minimize the duration of modified or lost access to businesses—as practicable.*
- *Provide signage, lighting, or other information to indicate that businesses are open.*

- *Phase construction in each area so as to maintain access to individual businesses for pedestrians, bicyclists, passenger vehicles, and trucks during business hours and important business seasons.*

- *Provide advance notice if utilities will be disrupted.*

- *Schedule major utility shut-offs during non-business hours.*

No independent evaluation study is planned. The Project is only one of the factors that could affect the economics of properties in the corridor.

The City will not provide direct financial assistance to mitigate temporary impacts during construction to businesses. Support for measures to minimize hardships will be evaluated on a case-by-case basis. Whether businesses remain open or closed/relocated during construction is often due to economic conditions and other factors outside of the control of the Project.

II. Potential Parking Effects of Completed System

A. Potential Parking Effects

Response to Comment #3 regarding parking

The comment involves three types of potential parking-related effects: lost off-street parking, lost on-street parking, and spillover parking in station areas. The number and location of on-street and off-street parking spaces to be removed by the Project are listed in Table 3-24 in the Final EIS. The estimated demand for spillover parking at each station is shown in Table 3-22 in the Final EIS.

As stated in Section 3.4.7 of the Final EIS, properties related to affected private, off-street parking spaces will be acquired for the Project as part of right-of-way needed along the length of the corridor. Compensation will be in accordance with the requirements of the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. The City will work with property owners to tailor any mitigation efforts for lost off-street parking as appropriate.

Regarding the loss of on-street parking, a survey of parking usage conducted in April 2009 found that, in locations where on-street parking will be removed by the Project, other parking capacity exists nearby to accommodate demand. Therefore, these on-street parking spaces will generally not be replaced by the City. However, some new on-street parking spaces will be created by the Project in the same general locations as the streets are rebuilt after project construction. New parking spaces could be short-term, long-term, or loading zones, depending on the need.

The effect of spillover parking will increase demand for existing parking spaces near stations. The travel demand forecasting model estimates a spillover parking demand of about five parking spaces near Kapalama Station. The City will consider strategies in coordination with

appropriate stakeholders to mitigate for any loss of parking supply and for increased demand from spillover parking near stations, if such impacts occur.

B. Mitigation Measures for Parking

Response to Comment #4 regarding parking mitigation

Please see the response to Comment #3 under II A (above).

III. Effects of Completed System on Businesses along Rail line and at Transit Stations

A. Physical Effects

1. Traffic, Visibility, and Access to Businesses

Response to Comment #5 regarding visibility and access to businesses

a. Visibility

The assessment of visual effects discussed in Section 4.8 of the Final EIS considers businesses, which include owners, customers, and employees, as important viewer groups. Each viewer group's characteristics were considered in the visual quality assessment for the viewpoints analyzed in Section 4.8 of the Final EIS. For example, the visibility for motorists along Dillingham Boulevard is illustrated on Figure 4-29 (Viewpoint 10) in the Final EIS. The simulated view shows that the overhead guideway will not block views of businesses or signage. The guideway support columns will be spaced at about 150 foot intervals, and views of businesses will not be greatly reduced. The overall visual effect in this area, as noted in Table 4-9, will be moderate.

More detail on the consideration of viewer response in this analysis can be found in the Honolulu High-Capacity Transit Corridor Project Visual and Aesthetic Resources Technical Report (RTD 2008e). Please refer to the following tables in that report:

- *Table 4-1: Landscape Unit 1 Viewpoints—Existing Visual Quality and Viewer Groups (this Landscape Unit corresponds to the East Kapolei to Fort Weaver Road Landscape Unit in the Draft EIS).*
- *Table 4-2: Landscape Unit 2 Viewpoints—Existing Visual Quality and Viewer Groups (this Landscape Unit corresponds to the Fort Weaver Road to Aloha Stadium Landscape Unit in the Draft EIS).*
- *Table 4-3: Landscape Unit 3 Viewpoints—Existing Visual Quality and Viewer Groups (this Landscape Unit corresponds to the Aloha Stadium to Kalihi Landscape Unit in the Draft EIS).*
- *Table 4-4: Landscape Unit 4 Viewpoints—Existing Visual Quality and Viewer Groups (this Landscape Unit corresponds to the Kalihi to Ala Moana Landscape Unit in the Draft EIS).*

b. Access

Access to all businesses located near the Project will be maintained. Traffic conditions will operate at acceptable levels-of-service except for four station areas: East Kapolei, UH West Oahu, Pearl Highlands, and Ala Moana Center. As shown in Table 3-23 of the Final EIS, park-and-ride, passenger drop-offs, and feeder buses will affect traffic at six intersections near these stations; however, measures included with the Project will mitigate these effects. These measures include traffic signalization and adding roadway lanes. Mitigation measures are discussed in Section 3.4.7 of the Final EIS.

c. Narrower Lanes

As indicated in Section 3.4.3 of the Final EIS, the guideway placements will not affect overall traffic operations in terms of the number of travel lanes available to motorists. Although the width of some lanes will be narrowed by the Project, they will remain well above the American Association of State Highway and Transportation Officials (AASHTO) recommended minimum standards for urban roadways. During Final Design, the relationship of travel lanes, shoulders, sidewalks, and horizontal clearances to obstructions such as columns will be considered together in determining the final widths of each item. Some lane widths could be increased from what is shown in Table 3-21. Permits for construction will not be approved unless a roadway is safe and acceptable to the responsible transportation agency. Lane widths will meet AASHTO and the Hawaii Department of Transportation (HDOT) standards and will not be a hazard for larger trucks. In addition, no sidewalks will be permanently closed as a result of the Project, as shown in Table 3-25 of the Final EIS.

d. Mitigation

Section 3.4.7 of the Final EIS identifies strategies that will mitigate potential effects associated with the Project. With mitigation strategies, traffic conditions in the East Kapolei, UH West Oahu, Pearl Highlands, and Ala Moana Center station areas will operate in a satisfactory manner. With regard to parking-related mitigation, as noted in Section 3.4.7 of the Final EIS, station areas with the highest estimated demands for spillover parking are at West Loch, Pearlridge, Iwilei, and Ala Moana Center. Section 3.4.4 of the Final EIS states that in locations where parking will be removed by the Project, other parking capacity generally exists nearby to accommodate demand. The cumulative and indirect effect of removing parking spaces to accommodate the Project will be that some people who parked in those spaces will either use another space nearby, will choose another mode to reach their destination, or may not make the trip at all.

The indirect effect of spillover parking around stations will increase demand for existing parking spaces. The City will consider strategies in coordination with appropriate stakeholders to mitigate for any loss of parking supply and for increased demand from spillover parking near stations, if such impacts occur. Mitigation could range from parking restrictions or regulation, permit parking or shared parking, or other measures as noted in Section 3.4.7 of the Final EIS.

2. Noise and Vibration

Response to Comment #6 regarding noise and vibrations

Section 4.10.1 of the Final EIS describes the various noise measurement locations, including the lanais of upper floors of residential buildings. Noise levels at higher-level floors were measured and analyzed as a result of comments received on the Draft EIS and are shown in Section 4.10.3 of the Final EIS. The results show only moderate noise impacts to one residential building between the proposed Civic Center and Kakaako Stations. With mitigation (wheel skirts and sound absorptive materials), there are no severe noise issues along the corridor as a result of the Project. For the building at 860 Halekauwila Street, sound absorptive material will be required from 200 feet Ewa of Kamani Street to 100 feet Koko Head of Kamani Street—a total of 300 feet. Future buildings above the guideway at similar distances from the guideway can be expected to be exposed to comparable moderate noise levels.

3. Security

Response to Comment #7 regarding security

The majority of the system will be located in existing roadway medians, which is not conducive to being used as a shelter. Stations will be patrolled and will be closed at night. The system will include park-and-ride facilities with security and lighting. The City is working with the Honolulu Police Department to develop the system's safety and security program. Security will be provided at all stations, park-and-ride facilities, and on all trains, as detailed in Section 2.5.4 of the Final EIS. As discussed in this section, security measures will include Crime Prevention through Environmental Design principles, which is a theory that proper design and effective use of the built and natural environments can reduce the fear and incidence of crime as well as improve the quality of life.

In addition, the City is conducting workshops with communities that will have rail stations. The purpose of the workshops is to engage the public about rail stations and provide opportunities to residents and businesses to contribute ideas about the appearance of station entryways in the surrounding areas. Ideas generated at the workshops will be incorporated into the station design process. Please plan to attend the workshops and advance the measures listed in your

comment during this process. For more information and to get involved in this process, please visit the project website at www.honolulutransit.org.

4. Visual and Aesthetic Effects

Response to Comment #8 regarding visual and aesthetic effects

Throughout the Draft EIs review and comment period, many commented that visual changes associated with the project's elements will result in substantial visual effects. Many comments received expressed concern that the elevated fixed guideway transit system will adversely affect O`ahu's unique visual character by creating blight and degrading views. In addition, commenters, including KS, requested more information on how the project elements will be integrated with their communities, especially in the areas around stations.

These comments on view effects are representative of the various viewer groups (including businesses) that have been considered in the visual and aesthetic conditions analysis presented in the Draft EIS and the Final EIS. In response to the viewer groups' responses, received during the Draft EIS comment period, several key views have been reevaluated and the Final EIS has been refined. The overall conclusions of the Draft EIS have not changed. The analysis of protected views and vistas was provided in earlier technical documents; however, the Final EIS more clearly describes the visual effects on these resources.

The island's unique visual character and scenic beauty were considered in the visual and aesthetic analysis presented in the Draft and Final EISs. As discussed in Section 4.8 of the Final EIS, the Project will be set in an urban context where visual change is expected and differences in scales of structures are typical. The Final EIS acknowledges that the Project will have shadow, light, and glare effects. Lights, including headlights, will be shielded as required by ordinance. Effects on property values are discussed in Section 4.19.2 of the Final EIS. Property values in the vicinity of rail systems tend to increase, including in the vicinity of rapid rail systems with elevated sections.

As discussed in Section 8.4 of the Final EIS, the City is currently conducting workshops with communities that will have rail stations. The purpose of the workshops is to engage the public about rail stations and provide opportunities to residents to contribute ideas about the appearance of station entryways in their areas. Ideas generated at the workshops will be incorporated into the station planning process. For more information and to get involved in this process, please visit the project website at www.honolulutransit.org..

The visual assessment was completed following U.S. Department of Transportation methodology, including the assessment of effects to viewer groups. Although this guidance was developed for highway projects, it was used because the Project is a linear transportation facility and the FTA has not issued

guidance specific to transit projects. DPP and other interested groups (e.g. the Outdoor Circle, Scenic Hawaii Inc., the Honolulu Chapter of the American Institute of Architects) also provided data or input. The major components of the visual impact assessment are described in 4.8.1 of the Final EIS. The U.S. Department of Transportation methodology does not prescribe the development of 360-degree visuals for multiple cross sections of the rail line. The methodology as described in the Final EIS provides the information required to determine visual impact of the Project.

In addition, the Project will provide users, including tourists, with expansive views from several portions of the corridor by elevating riders above highway traffic, street trees, and low structures adjacent to the alignment. Section 4.8.3 of the Final EIS contains specific environmental, architectural, and landscape design criteria that will help minimize visual effects of the Project. Design criteria will govern all new utility construction outside of buildings, as well as the maintenance, relocation, and restoration of utilities encountered or affected by construction of the fixed guideway.

Mitigation measures based on design principles will be implemented in final design to minimize visual effects and enhance the visual and aesthetic opportunities as feasible. These measures are included in Section 4.8.3 of the Final EIS and include, but are not limited to the following::

- *Develop and apply design guidelines that will establish a consistent design framework for the Project with consideration of local context.*
- *Retain existing trees where practical and provide new vegetation.*
- *Shield exterior lighting.*
- *Coordinate project design with the City's transit-oriented design (TOD) program within the Department of Planning and Permitting.*
- *Consult with communities surrounding each station for input on station design elements.*

Utility relocations are discussed in Section 4.5.3 of the Final EIS. The Project will relocate utilities where required. The City will coordinate with adjacent property owners and utility companies. Utility relocations will be designed to be compatible with the community setting as feasible.

B. Economic Effects

1. Business Effects

Response to Comment # 9 regarding economic effects on businesses

The Project is the construction and implementation of rail transit service, which is discussed in the Draft and Final EISs. As discussed in Section 4.19.2 of the Final EIS, TOD is expected to occur in station areas as an indirect effect of the Project. Based on experiences with systems in other places with all types of rail systems (i.e., elevated, at-grade, and underground), it is the increased mobility and accessibility afforded by the Project that will increase the desirability and value of land near stations and attract new real estate investment nearby (in the form of TOD). Planning and zoning around station areas will be established and conducted by the City's Department of Planning and Permitting under a process covered by the City's new TOD Ordinance 09-4. For properties outside the boundaries of TOD station locations, these requested studies are beyond the scope of the Project and the EIS.

As noted earlier, an additional independent study is not planned.

2. Redevelopment

Response to Comment #10 regarding redevelopment options

The elevated guideway will require consideration of the most appropriate TOD designs to take full advantage of the space adjacent to the Project and integrate the stations into those plans. Plans will require adaptation of the elevated station into the adjacent community. This approach has been successfully implemented in cities with elevated rail such as Vancouver, B.C., San Francisco, and Miami.

IV. Cost and Financial Analysis

Response to Comment #11 regarding financial feasibility

Chapter 6 of the Final EIS describes the financial resources expected to be needed to pay for the capital costs of the Project and for ongoing operating and maintenance costs. Capital costs of the Project, including finance charges, are expected to be fully paid for by a combination of FTA Section 5309 New Starts and FTA Section 5307 Funds from the Federal government and revenues from the General Excise and Use Tax (GET) surcharge levied from 2007 through 2022.

The capital plan for the Project is presented in Section 6.3 of the Final EIS, which includes a description of the amount of funding anticipated from various sources. The capital plan takes the current economic downturn into account. If the Project is over budget, other sources of revenue have been identified in Section 6.6 of the Final EIS to cover such shortfalls; however, $1.3 billion in year-of-expenditure dollars is included in the project budget as contingency for just such eventualities.

The financial plan will be updated periodically as conditions warrant and as the Project moves ahead. This is a requirement of the Federal New Starts process and is intended to ensure the Project continues to be financially feasible and to avoid the types of problems encountered on other projects.

The State's announcement of a series of projects for construction as a result of a Federal stimulus program are already included in the No Build Alternative and are shown in Table 2-4 of the Final EIS. All the major stimulus projects are identified in the OahuMPO's Regional Transportation Plan and were also part of the No Build Alternative in the Draft and Final EISs against which all the Build Alternatives were compared.

V. Effects of Land Acquisitions

Response to Comment # 12 regarding land acquisition and mitigation

Individual assessments will be performed by the Right-of-Way Team as the design progresses. Right-of-way plans are shown in Appendix C of the Final EIS. Maps show full and partial acquisitions.

All acquisitions will follow the requirements of the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. The City will work with land owners if non-conformities occur as a result of acquisitions.

If payment is delayed more than 30 days after the final judgment, additional interest at the rate of 5 percent shall be added to the final judgment (Section 100-25, Hawaii Revised Statutes). For a Federal-aid project, the cost of this interest payment is not eligible for Federal reimbursement.

VI. Kelo Concerns

Response to Comment # 13 regarding private property

The Project evaluated in the Draft and Final EISs concerns the construction and implementation of rail transit service. However, as discussed in Section 4.19.2 of the Final EIS, TOD is expected to occur in station areas as an indirect effect of the Project. Planning around stations is currently underway by the City's Department of Planning and Permitting (DPP) under a process covered by the City's new TOD Ordinance 09-4. The TOD ordinance, and subsequent TOD plans, are designed to encourage private investment in the vicinity of the stations, as appropriate. The DPP has encouraged community involvement in the development of those plans. As for the Project, the City will acquire only properties needed to build the Project, which includes about 190 full and partial acquisitions, mostly strip acquisitions along roadways. For any acquisition, the City will follow the law as put forth by the U.S. Supreme Court in the Kelo Decision of 2005.

VII. TODs As Potential Mitigation

Response to Comment #14 regarding TOD

In March 2009, the City Council approved and the Mayor of Honolulu signed Bill 10 (2008) (Ordinance 09-4), which defines the City's approach to TOD around fixed guideway stations. New zoning regulations will address parking standards, new density provisions, land use, open space, and affordable housing. Financial incentives could include public-private partnerships, real property tax credits, and infrastructure financing.

In addition, land use impacts are required to be disclosed in an EIS as part of the NEPA process. Land use impacts, including potential TOD development, are critical criteria for FTA in ranking projects for Federal funding. Potential TOD development is addressed in Section 4.18 of the Draft EIS. This section was updated in the Final EIS to reflect Ordinance 09-4. Evaluation of TOD projects in other cities with new rail projects is beyond the scope of this EIS.

VIII. Study of the North King Street Alignment

Response to Comment #15 regarding a North King Street alignment

The North King Street alignment was evaluated in the Alternatives Analysis. This alignment would have effected a greater number of parcels located within environmental justice/communities of concern areas (29 parcels of which 2 are residential versus 23 parcels of which 0 are residential along Dillingham Boulevard). In addition, a North King Street alignment would have moderate-high visual impacts whereas the Dillingham Boulevard alignment would have low-moderate visual impacts. The noise analysis conducted revealed moderate impacts at 52 receivers along the North King Street alignment whereas there would be moderate impacts at 17 receivers along Dillingham Boulevard.

There are 43 cultural practices and resources along the North King Street alignment that would be affected during construction and 2 that would be affected during operation. With the Dillingham Boulevard alignment, 23 cultural practices would be affected during construction and 0 would be affected during operation (cultural practices varied from one-time annual events to churches or community organizations where cultural activities are regularly held). The historic analysis identified pre-1965 tax map lots within the study corridor. Locations on this list included resources reviewed in previous studies and/or already included in the State Historic Preservation Division's State and National Register lists. The North King Street alignment is adjacent to 33 historic resources (of which 5 are on either the Hawaii Register or Eligible for the National Register) whereas the Dillingham Boulevard alignment is adjacent to 12 potentially historic resources (of which only 1 is on one of the registers).

The North King Street alignment would have required a longer and less efficient route and would have increased the system's cost by $50 million. This information is provided in the Alternatives Analysis and technical reports prepared for the Alternatives Analysis. The North King Street alignment will not be reexamined as part of the Final EIS.

IX. Evaluation of An At-Grade or Multi-Modal System in the Urban Core

Response to Comment #16 regarding an at-grade or multimodal transit system

As stated in Section 2.2 of the Final EIS, prior to selecting an elevated fixed guideway system, a variety of high-capacity transit options were evaluated during the Primary Corridor Transportation Project (1998—2002) and Alternatives Analysis. Options evaluated and rejected included an exclusively at-grade fixed guideway system using light rail or bus rapid transit (BRT) vehicles, as well as a mix of options consisting of both at-grade and grade-separated segments.

The Alternatives Screening Memorandum (DTS 2006a) recognized the visually sensitive areas in Kakaako and Downtown Honolulu, including the Chinatown, Hawaii Capital, and Thomas Square/Academy of Arts Special Design Districts. To minimize impacts on historic resources, visual aesthetics, and surface traffic, the screening process considered 15 different combinations of tunnel, at-grade, or elevated alignments between Iwilei and Ward Avenue. Five different alignments through Downtown were advanced for further analysis in the Alternatives Analysis, including an at-grade portion along Hotel Street, a tunnel under King Street, and elevated guideways along Nimitz Highway and Queen Street.

The Alternatives Analysis Report (DTS 2006b) evaluated the alignment alternatives based on transportation and overall benefits, environmental and social impacts, and cost considerations. The report found that an at-grade alignment along Hotel Street would require the acquisition of more parcels and affect more burials than any of the other alternatives considered. The alignment with at-grade operation Downtown and a tunnel through the Capital Historic District, in addition to the environmental effects such as impacts to cultural resources, reduction of street capacity, and property acquisition requirements of the at-grade and tunnel sections, would cost more than $300 million more than the least expensive alternative.

The Project's purpose is "to provide high-capacity rapid transit" in the congested east-west travel corridor. The need for the Project includes improving corridor mobility and reliability. The at-grade alignment would not meet the Project's Purpose and Need because it could not satisfy the mobility and reliability objectives of the Project. Some of the technical considerations associated with an at-grade versus elevated alignment through Downtown Honolulu include the following:

- ***System Capacity, Speed, and Reliability:*** *The short, 200-foot blocks (or less) in Downtown Honolulu would permanently limit the system to two-car trains to prevent stopped trains from blocking vehicular traffic on cross-streets. Under ideal circumstances, the capacity of an at-grade system could reach 4,000 passengers per hour per direction, assuming optimistic five minute headways. Based on travel forecasts, the Project will need to carry approximately 8,000 passengers in the peak direction by 2030. Moreover, the system can be readily expanded to carry over 25,000 in each direction by reducing the interval between trains (headway) to 90 seconds during the peak period. To preserve a comparable system capacity, speed, and reliability, an at-grade alignment would require a fenced, segregated right-of-way that would eliminate all obstacles to the train's passage, such as vehicular, pedestrian, or bicycle crossings. Even with transit signal priority, the at-grade speeds would be slower and less reliable than*

an elevated guideway. At-grade system would travel at slower speeds due to the shorter blocks, tight and short radius curves in places within the constrained and congested Downtown street network, the need to obey traffic regulations (e.g., traffic signals) along with other vehicles, and potential conflicts with other at-grade activity such as cars, bicyclists, and pedestrians. These effects mean longer travel times and far less reliability than a fully grade-separated system. None of these factors affect an elevated rail system. The elevated rail can travel at its own speed any time of the day regardless of weather, traffic or the need to let cross traffic proceed at intersections.

- ***Mixed-Traffic Conflicts**: With the planned three-minute headways, the short cycle of traffic lights would affect traffic flow and capacity of cross-streets. Furthermore, there would be no option to increase the capacity of the system by reducing the headway to 90 seconds. An at-grade system would also require removal of two or more existing traffic lanes on affected streets. This effect is significant and would exacerbate congestion for those who choose to drive. Congestion would not be isolated to the streets that cross the at-grade alignment but instead would spread throughout Downtown. The Final EIS shows that the Project's impact on traffic will be isolated and minimal, and in fact will reduce system-wide traffic delay by 18 percent compared to the No Build Alternative (Table 3-14, Islandwide Daily Vehicle Miles Traveled, Vehicle Hours Traveled, and Vehicle Hours of Delay—Existing Conditions, No Build Alternative, and the Project, in the Final EIS). That is because the elevated guideway will require no removal of existing travel lanes, while providing an attractive, reliable travel alternative. When traffic slows, or even stops due to congestion or incidents, the elevated rail transit will continue to operate without delay or interruption.*

  The at-grade light rail, with its continuous tracks in-street will create major impediments to turning movements, many of which would have to be closed to eliminate a serious crash hazard. Even where turning movements are designed to be accommodated, at-grade systems experience significant collision problems. In addition, mixing at-grade fixed guideway vehicles with cars, bicyclists, and pedestrians presents a much higher potential for conflicts compared to grade-separated conditions. Where pedestrian and automobiles cross the tracks in the street network, particularly in areas of high activity (e.g., station areas or intersections) there is a risk of collisions involving trains that does not exist with an elevated system. There is evidence of crashes between trains and cars and trains and pedestrians on other at-grade systems throughout the country. This potential would be especially high in the Chinatown and Downtown neighborhoods, where the number of pedestrians is very high and the aging population presents a particular risk.

- ***Construction Impacts**: Constructing an at-grade rail system could have more effects than an elevated system in a number of ways. The wider and continuous footprint of an at-grade rail system compared to an elevated rail system (which*

touches the ground only at discrete column foundations, power substations, and station accessways) increases the potential of utility conflicts and discovery of sensitive cultural resources. In addition, the extra roadway lanes taken away for the system would result in increased congestion or require that additional businesses or homes be taken to widen the roadway through Downtown. Additionally, the duration of short-term construction impacts to the community and environment with an at-grade system would be considerably greater than with an elevated system. Because of differing construction techniques, more lanes would need to be continuously closed for at-grade construction and the closures would last longer than with elevated construction. This would result in a greater disruption to business and residential access.

Because it is not feasible for an at-grade system through Downtown to move passengers rapidly and reliably without significant detrimental effects on other transportation system elements (e.g., the highway and pedestrian systems, safety, reliability, etc.), an at-grade system would have a negative system-wide impact that would reduce ridership throughout the system. The at-grade system would not meet the Project's Purpose and Need and therefore does not require additional analysis.

The FTA and DTS appreciate your interest in the Project. The Final EIS, a copy of which is included in the enclosed DVD, has been issued in conjunction with the distribution of this letter. Issuance of the Record of Decision under NEPA and acceptance of the Final EIS by the Governor of the State of Hawaii are the next anticipated actions and will conclude the environmental review process for this Project.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

Enclosure